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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/277,575	03/27/1999	MARTHA KAREN NEWELL	V00139/70028	3748

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EXAMINER	
VANDERVEGT, FRANCOIS P	
ART UNIT	**PAPER NUMBER**
1644	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/277,575	NEWELL, MARTHA KAREN	
	Examiner	Art Unit	
	F. Pierre VanderVegt	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3,4,8-13,39,44,143,144,147 and 149* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3,4,8-13,39,44,143,144,147 and 149* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *08152005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This application claims the benefit of the filing date of provisional applications 60/082,250, 60/101,580 and 60/094,519.

Claims 1, 2, 5-7, 14-38, 40-43, 45-142, 145, 146 and 148 have been canceled.

Claims 3, 4, 8-13, 39, 44, 143, 144, 147 and 149 are currently pending and are the subject of examination in the present Office Action.

1. In view of Applicant's amendment filed December 28, 2004 the following ground of rejection is maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 3, 4, 8-13, 39, 44, 143, 144, 147 and 149 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for decreasing mitochondrial membrane potential in a tumor cell *in vitro*, does not reasonably provide enablement for decreasing mitochondrial membrane potential in a tumor cell *in vivo*. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

It was previously stated: "The claims, reading upon a treatment for cancer, are broadly drawn to contacting tumor cells with an amount of an MHC class II HLA-DR inducing agent and administering an HLA-DR ligand to the tumor cell for the disclosed purpose of delivering a medicament or lytic agent to the tumor cell. The specification is not enabling for the treatment of cancer in this manner.

Factors to be considered in determining whether undue experimentation is required are summarized in Ex parte Forman, 230 USPQ 546 (BPAI 1986). They include the nature of the invention, the state of the prior art, the relative skill of those in the art, the amount of direction or guidance disclosed in the specification, the presence or absence of working examples, the predictability or unpredictability of the art, the breadth of the claims, and the quantity of experimentation which would be required in order to practice the invention as claimed.

HLA-DR is a family of HLA class II haplotypes that is not specific to a tumor cell but is specific to the human subject being treated. As such, class II HLA-DR molecules of the same haplotype are expressed on every antigen-presenting cell in that subject's body. Based upon the level of knowledge of the artisan, the artisan would expect that every HLA-DR molecule on every antigen-presenting cell in that subject's body was equally capable of up-regulating expression of HLA-DR and capturing said ligand. Capture would not be limited to the cells of the cancer. Accordingly, rather than inducing a response

specifically against/in the cancer cells, the artisan would predict that a more generalized response would be generated in all antigen presenting cells in any part of the body. The claims are not limited to, and the specification does not disclose a mechanism for, specifically targeting the peptide to the HLA-DR-expressing cells of the tumor without allowing normal antigen presenting cells of the subject to also capture and be affected by the ligand binding to HLA-DR.

In view of the nature of the invention, the state of the art, the unpredictability of the art, the lack of sufficient guidance in the specification and the breadth of the claims, it would take undue trials and errors to practice the claimed invention and this is not sanctioned by the statute."

Applicant's arguments filed August 15, 2005 have been fully considered but they are not persuasive.

Applicant argues that the claimed invention is fully enabled for *in vivo* therapy and that the rejection is merely based on clinical safety issues that are not a test for enablement. Contrary to Applicant's position, the enablement rejection is not based upon clinical safety, but the fact that the invention as claimed cannot target the specific cells to which the agent is supposed to be directed. Applicant attempts to bolster the argument for enablement by pointing out the clinical use of ADRIAMYCIN. ADRIAMYCIN, a trademark for doxorubicin hydrochloride, is an anthracycline antibiotic used for cancer chemotherapy that targets actively dividing cells. Doxorubicin is structurally unrelated to the agents recited in the claim, being composed of an adriamycinone element linked to a daunosamine ring, which intercalates DNA of actively dividing cells, such as rapidly dividing tumor cells. Accordingly, ADRIAMYCIN could be considered preferential in its targeting of tumor cells. The same could not be said for the agents of the instantly claimed invention. ADRIAMYCIN is structurally and functionally distinct from the agents recited in the claim. Merely equating an observed *in vitro* effect of ADRIAMYCIN to an observed *in vitro* effect of the agents recited in claims 3 and 39 does not translate into a comparison of *in vivo* delivery of the agents.

Applicant further argues that the specification teaches "a delivery vehicle such as a liposome to target tissue such as the site of a tumor." However, while claims are to be read in light of the specification, and limitations from the specification are not to be read into the claims. The claims are to be read in their broadest reasonable context.

Conclusion

3. No claim is allowed.

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Pierre VanderVegt whose telephone number is (571) 272-0852. The examiner can normally be reached on M-Th 6:30-4:00 and Alternate Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

F. Pierre VanderVegt, Ph.D.
Patent Examiner
February 6, 2006

David G Saunders
DAVID SAUNDERS
PRIMARY EXAMINER
ART UNIT 182 1644